Claims

1) A database for storing information, comprising:

a first element type field for storing information on a plurality of first elements;

a second element type field, different than the first element type field, for storing information on a plurality of second elements;

the first and second element types being selected from the list of photocuring system elements including substrates, photoinitiators, light sources, sensitizers, UV stabilizers, pigments and dyes; and

the first element type field and second element type field each including a name for each element and a representation of a wavelength response for each element.

2) The database of claim 1, wherein:

the wavelength response for each element is broken into wavelength regions, each wavelength region be represented by a symbol.

3) The database of claim 2, wherein:

the wavelength response is for wavelengths between 200nm and 1000 nm and each wavelength region is 50nm wide.

4) The database of claim 1, further comprising:

a third element type, different than the first and second element types, selected from the list of photocuring system elements, the third element type field including a name for each element and a representation of a wavelength response for each element.

5) A method of optimizing the performance of a light curing polymer system including multiple component types, the component types including a light source, a photoinitiator and a substrate, where the light source is arranged to radiate its light through the substrate to the photoinitiator, the light source

operating at a set of wavelengths, the substrate allowing only a set of wavelengths of light to pass there through and the photoinitiators only activated when it is hit with a set of wavelengths, the method of optimizing including the steps of:

selecting a first component, said first component operating at first set of wavelengths defining a first wavelength spectrum;

selecting a second component from of a type different than the type of the first component, the second component operating at a second set of wavelengths and having a second wavelength spectrum, at least one of said second set of wavelengths being present in said first set of wavelengths.

6) The method of claim 5, wherein wavelength regions are established and a representative name is assigned to each wavelength region.

7) The method of claim 6, wherein the set of wavelengths for each component are identified using the representative names for the wavelength regions into which the component wavelength set fall.

8) The method of claim 7 , wherein said representative names of the selected first component are compared to the representative names of the plurality of second components so that only a second component having at least one representative name in common with the selected first component can be chosen.

9) The method of claim 8, comprising the further step of:

selecting a third component different than the first or second component from a plurality of possible third components, the third component operating at a third set of wavelengths and having a third wavelength spectrum, at least one of said third set of wavelengths being present in said first set of wavelengths.

10) A method of comparing characteristics of components of a light curing polymer system where a light source is directed through the substrate to the photoinitiator, the light source operating at a first range of wavelengths, the substrate allowing only a second range of wavelengths of light to pass there through and the photoinitiator only being activated when it is irradiated with a third range of wavelengths, the method of comparing including the steps of:

storing the characteristics of the constituents in memory, the characteristics including name and wavelength response;

selecting a first component;

selecting a second component;

graphically displaying on the same display, the name and wavelength response of the first component and the second component.

11) The method of claim 10, further comprising the step of:

determining an area of an overlapping region of the wavelength responses of the first and second components.

12) The method of claim 11, wherein the area determination is performed using a sum of the rectangles under the overlapping curves method.

13) A method for designing photocuring systems, comprising the steps of:

connecting a user terminal with a remote computer storing a photocuring database containing a first element type field for storing information on a plurality of first elements, a second element type field, different than the first element type field, for storing information on a plurality of second elements, the first and second element types being selected from the list of photocuring system elements including substrates, photoinitiators, light sources, sensitizers, UV stabilizers, pigments and dyes and the first element type field and second element type field each including a name for each element and a representation of a wavelength response for each element;

transmitting a first signal representative of a selection of a first element to the remote computer;

transmitting a second signal representative of a selection of a second element to the remote computer;

receiving from the remote computer a signal containing information on the wavelength response of the first and second elements.